

GEORGE ENGELMANN BOTANICAL NOTEBOOKS

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JOURNAL OF PROCEEDINGS.

161

reins zur Beförderung des Gartenbaues, 1860, Nos. 1-52—1861, Nos. 1-6, Berlin, *from the Society*; Atti della Societa Ital. di Scienze Nat., Milano, Vol. II., Fasc. 2, 1860, *from the Society*; Atti dell I. R. Istituto Veneto, T. V., Ser. iii., Disp. 10—T. VI., Ser. iii., Disp. 1-3, 1860-1, *from the Society*; Visir-und Recheninstrumente von Ernst Sedlacek, Wien, 1856,—Rechenschieber, von E. Sedlacek, Wien, 1856,—Kompendium der ebenen und sfärischen Trigonometrie von E. Sedlacek, Wien, 1856, *from Mr. Senover*; L'Ortolano, Giornale Popolare d'Orticoltura, Trieste, Anno I. 1-12, III. 1-9, 1859-60,—Allocuzione da Prof. Adolfo Stopice, Trieste, 1860, *from the Society*; Fr. Ambrosii Flora Tiroliae Australis, Vol. II., Pt. 4, *from the Author*; Verhandl. des Naturh. Vereins, Bonn, Jahrg. XVII., 1-2, 1860, *from the Society*; Sitzungsbs. der K. K. Akad. der Wissenschaften, Wien, Band XLII., No. 22-28, 1860, *from the Society*; Nachrichten von der Georg-Augusts-Univ. u. der K. Gesellsch. der Wissenschaften, Göttingen, 1860, No. 1-29, *from the Society*; Bull. de la Société Linnéenne de Normandie, Vol. V. 1859-60, Caen, 1861, *from the Society*; Mém. de l'Acad. Imperiale de Metz, Ann. XLI., 1859-60, *from the Academy*; Jahrbücher des Vereins für Naturk. in Nassau, XIV. Heft, Wiesbaden, 1859, *from the Society*; Dr. J. C. Ed. Hoser's Rückblicke, Prag, 1848, von Dr. Weitenweber,—Sitzungsbs. der K. böhm. Gesellsch. der Wissenschaften, Prag, 1859, Juli-Dec.—1860, Jan.-Juni, *from the Society*; I. Bericht des Offenbacher Vereins für Naturk, 1860, *from the Society*; Würzburger Medicin. Zeitschrift, II. Band, 1-2 Heft, 1861, *from the Society*; Der Zoologische Garten, von Dr. D. F. Weinland, Jahrg. II., No. 1-6, 1860-61, *from the Editor*; XX. Bericht über das Museum Francisco-Carolinum, Linz, 1860, *from the Institution*; Monatsb. der K. Preuss. Akad. der Wissenschaften, 1860, Berlin,—General Register, 1836-58, Berlin 1860, *from the Academy*; Gelehrte Anzeigen, Vol. 49 & 50,—Sitzungsbs. des K. bayer. Akad. des Wissenschaften, 1860, Heft 1-3, München,—Verzeichniss der Mitglieder, 1860,—Bedeutung der Sanskritstudien, von Dr. Wilh. Christ, 1860,—Denkrede auf Alex. von Humboldt, von C. F. P. von Martius, 1860,—Grenzen und Grenzgebiete der physikalischen Forschung, von Dr. C. ... 1856, *from the Royal Academy*; Proc. ... nces

$$\text{pt } \frac{47 - 58}{30} = 1.6 - 1.9 \text{ mm dia}$$

$$\text{or prob } 1.5 - 2$$

Ollen of roth sp 0.065-0.072 mm
- - - S Carr sp 0.061-0.070



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cm

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GARDEN

11708

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162 TRANS. OF THE ACAD. OF SCIENCE.

Dr. Koch presented specimens of quartz and of the silicious conglomerate from Madison County mentioned in Dr. Hiltgard's letter.

Dr. Engelmann stated that the mean temperature of July (77.5°) had been lower than the usual mean of that month, and that the fall of rain during the same month (2.04 inches) was about one-half less than usual.

Dr. Wislizenus stated that the mean of atmospheric electricity of July had been 3.5° less than that of the month previous, and that the amount had been gradually decreasing since winter.

August 19, 1861.

The President, Dr. ENGELMANN, in the chair.

Six members present.

A letter was read from A. F. Bandelier, Jr., Highland, Ill., Aug. 1, 1861, communicating meteorological observations at Highland.

The following donations to the library were received:

Bull. de la Société Géologique de France, Ser. ii., T. XVIII., Feuilles 13-14, 22-31, Paris, 1861, *from the Society*; Proc. Amer. Phil. Society, Philad., Vol. X, No. 65, 1861, *from the Society*; Jour. Franklin Inst., Philad., A. M. M. *from the Institu*; Proc. Acad. Nat. Sciences Philad., ^{no} 1, König h. Gie



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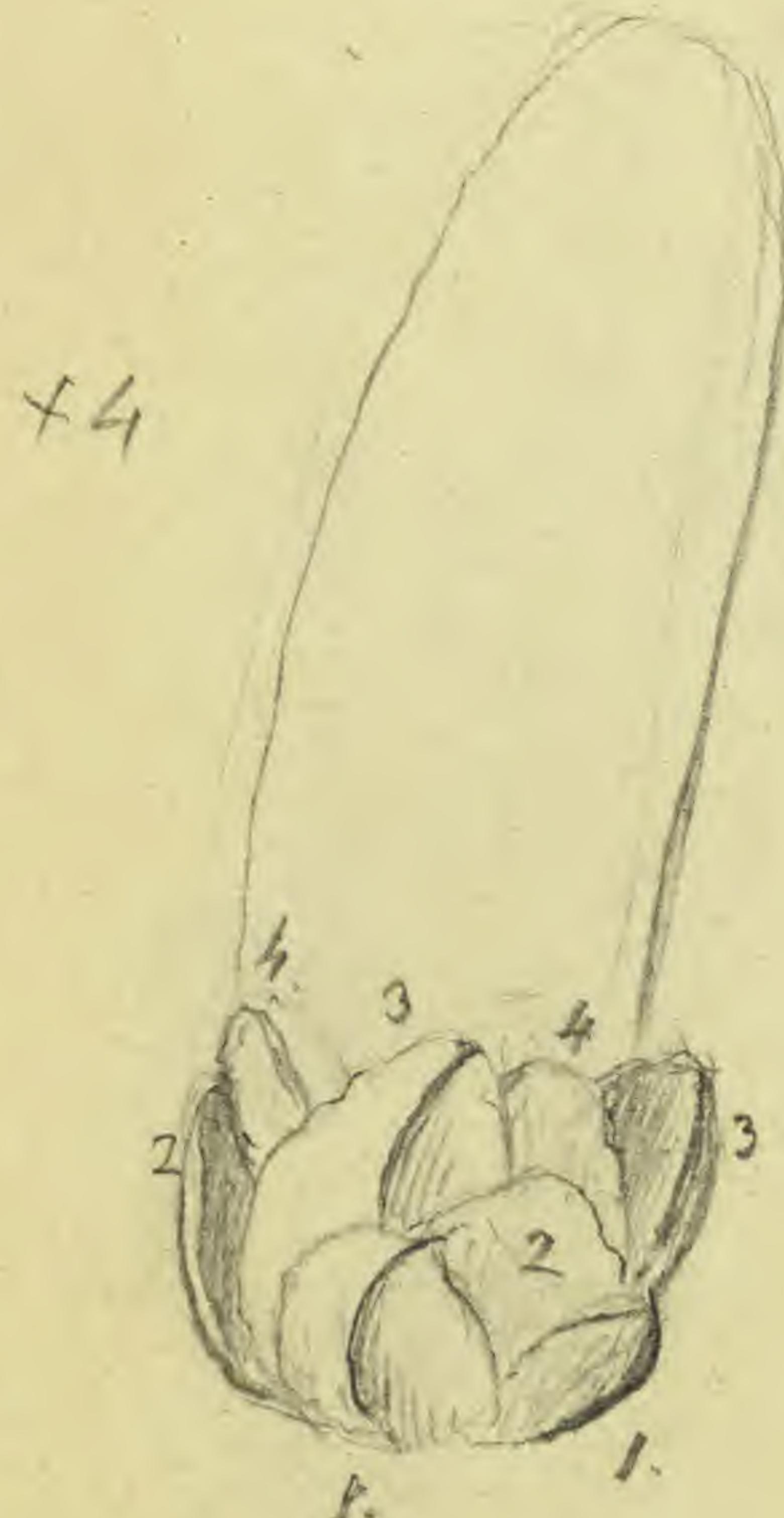


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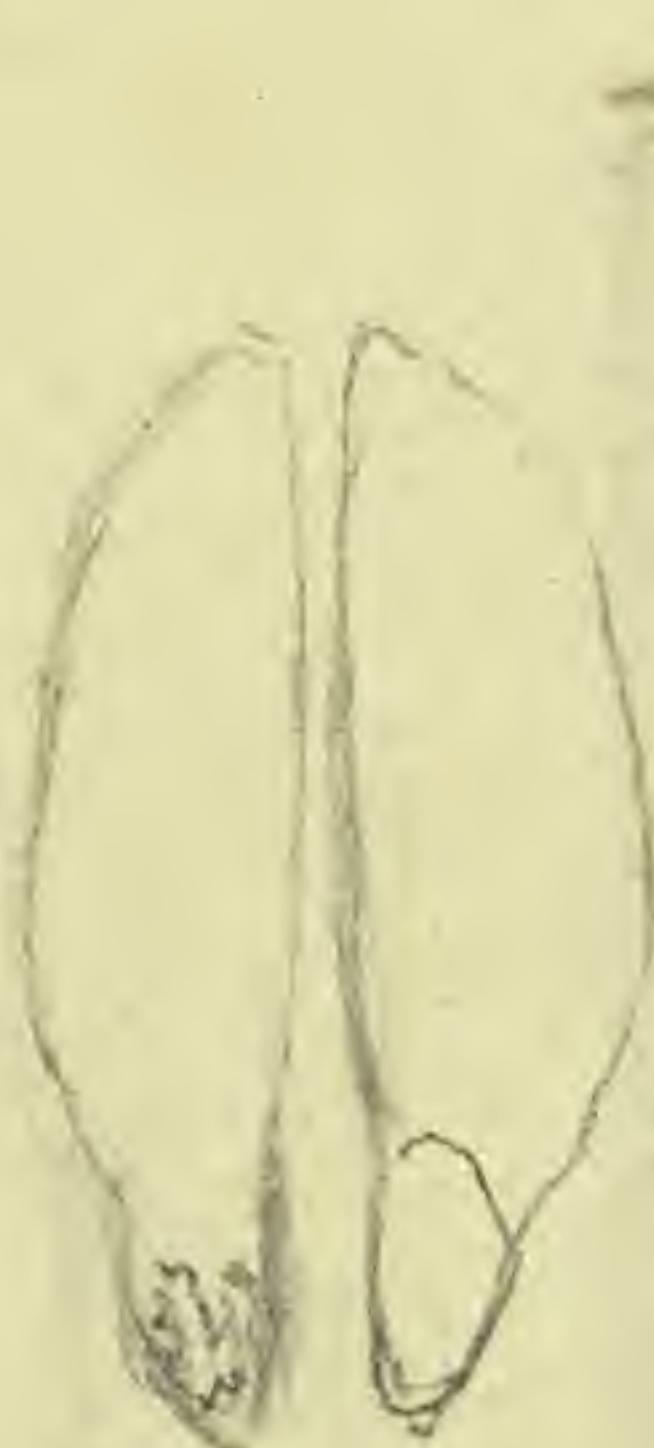
Pinus strobus

May 6 1870

Aiken S. Carolina April 1870



Pollen grains $\frac{25.5 - 29}{415}$ mm
nearly $\frac{26 - 27}{415}$ mm
 $= 0.061 - 0.067$ mm



outside of seed
partly covered
by wing



Seed (inside) rough
but not ridged

x10



8 scales



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cm

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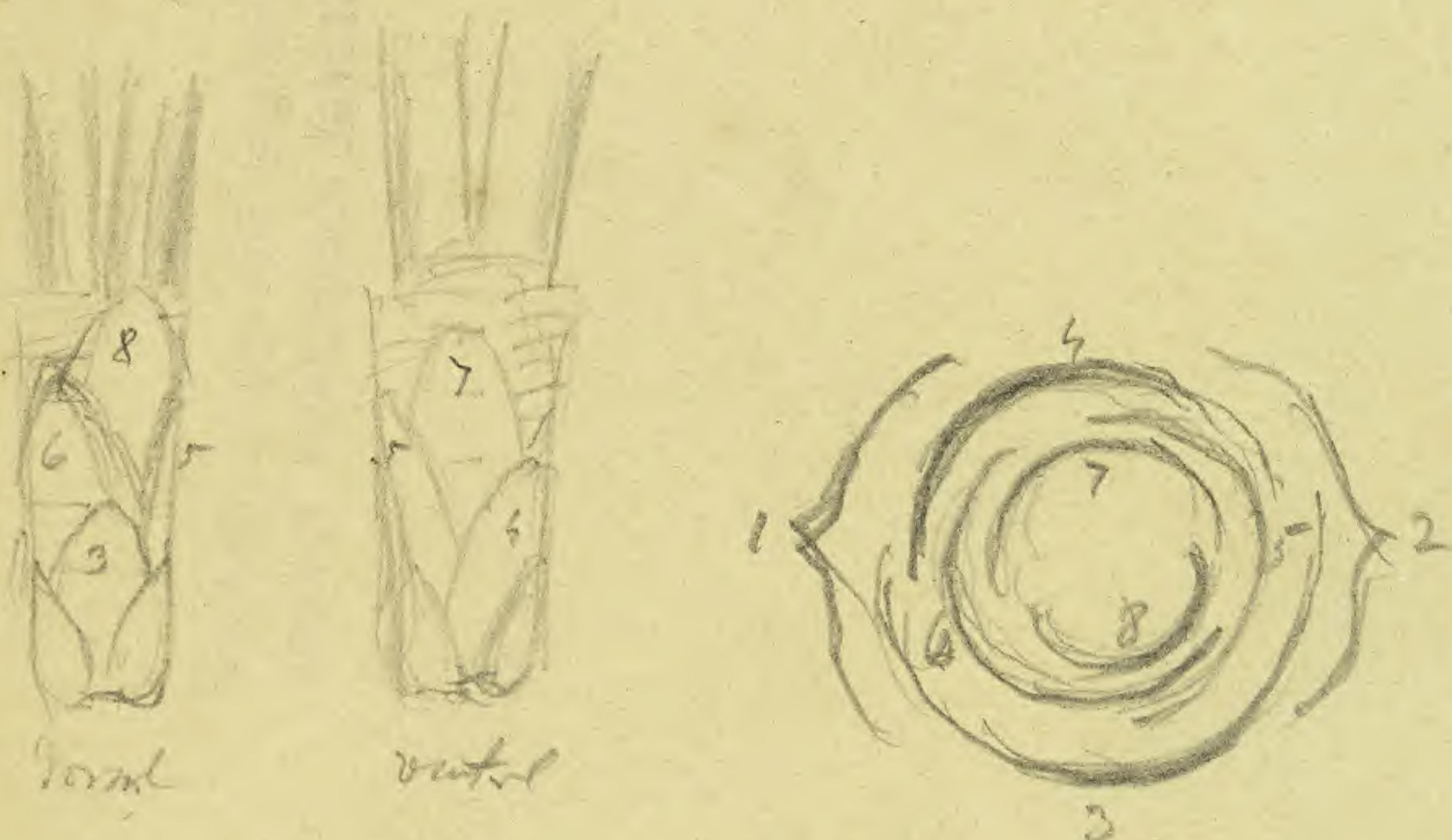
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Pinus strobus

May 22 1875

x4

Pennsylvaniæ



young shoots of *Pinus*
which in vigorous shoots all pinnacles
otherwise of different lengths.
more or less persistent



0 1 2 3 4 5 6 7 8 9 10
cm

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1710

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0
cm

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Pinus strobus

May 9 1877

403 Mission May 8 1877

not in full bloom yet

frank

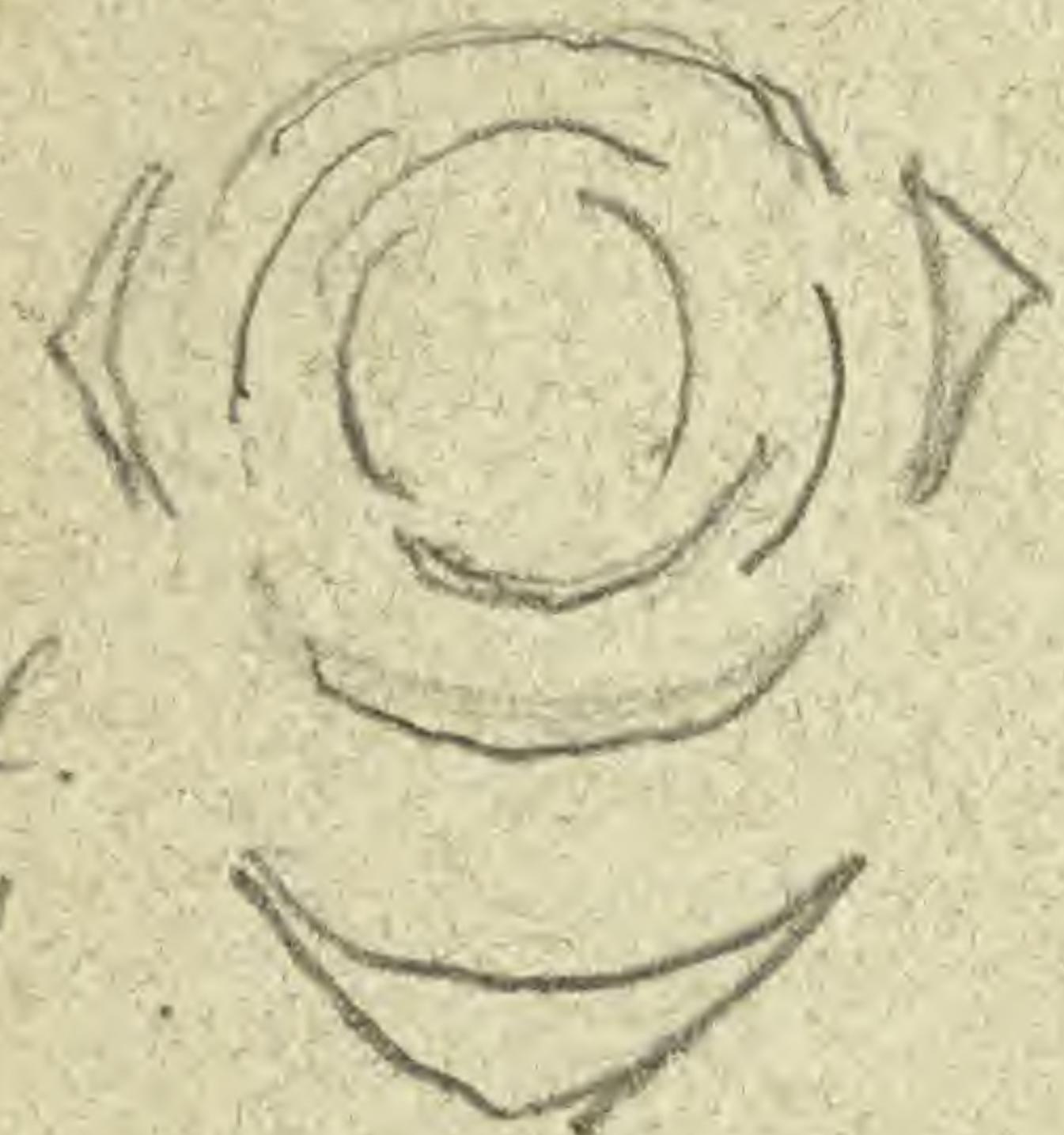
Pollen 1605

31-33

415

0.075 - 0.080 mm

10 invol.
scales



x10

anthers in 8 somewhat
oblique lines

x4



currents last and scales
half as long as the
inner ones



0 1 2 3 4 5 6 7 8 9 10

cm

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315-2100 2200
2005 220
2950

0.075 0.080

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H71



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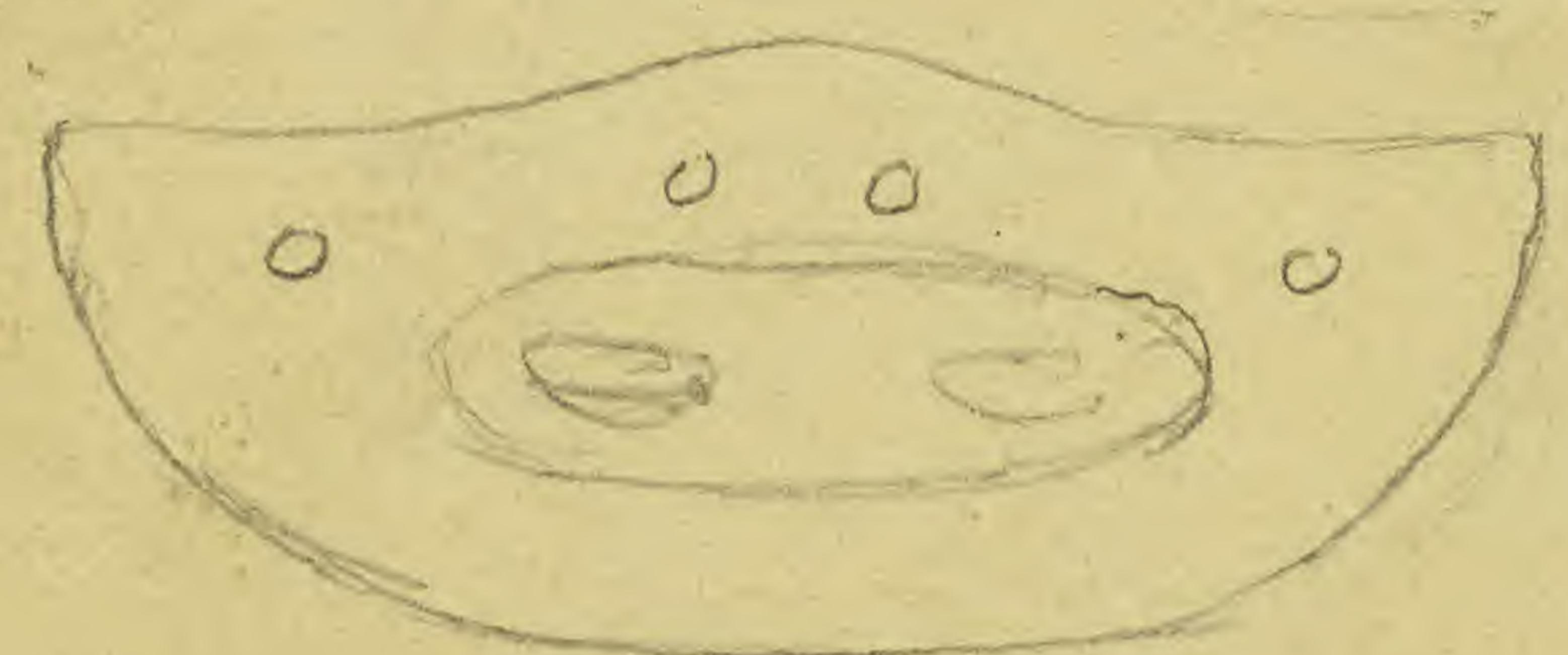
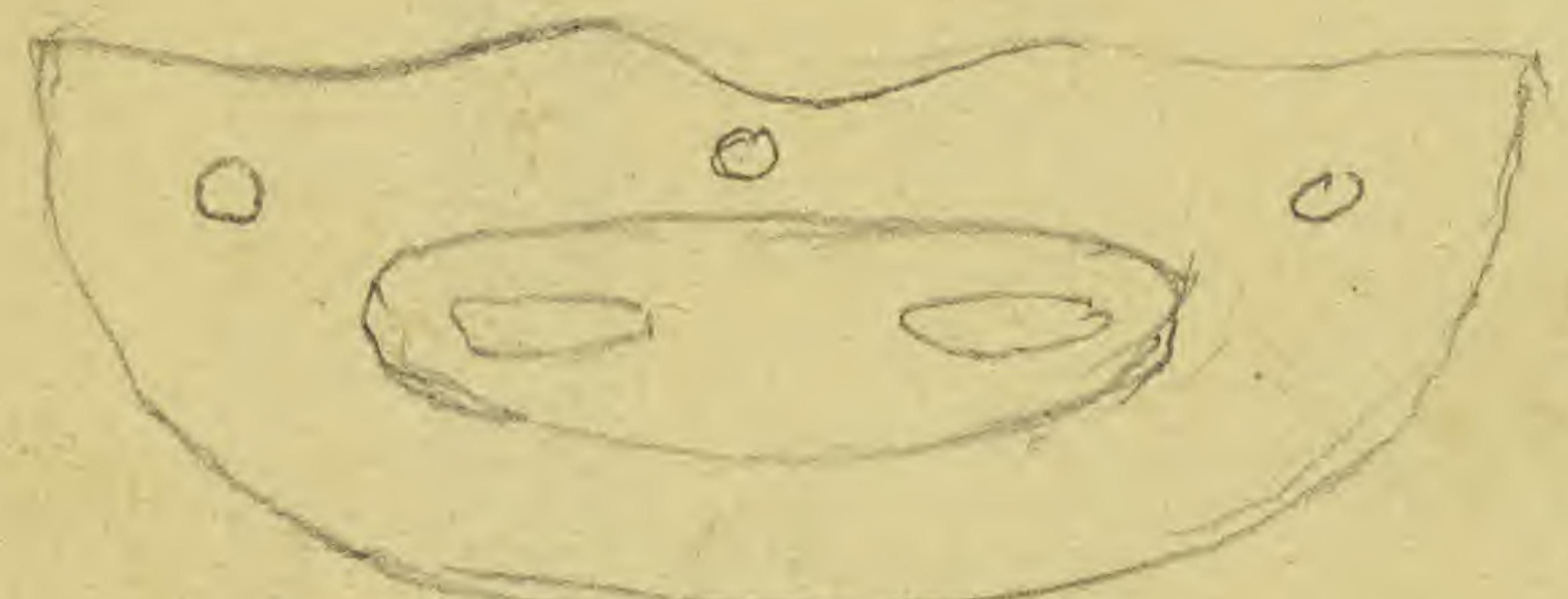
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P. inops

May 19 1878

x30

Aiken, Arnold



x60

Ducts parenchymatous
lateral, and often crossing
ones above, rarely
below.
rhizopodion on it
very scanty under
surface
upper surface of leaf often
grooved or keeled.



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cm

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HENRY T. BROWNING

APOTHECARY.

No. 2600 Laclede Ave., S. W. Cor. Jefferson Ave.,
ST. LOUIS, MO.

No.

Date,

187

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Geo. Engelmann, M. D.,

No. 3003 Locust Street,

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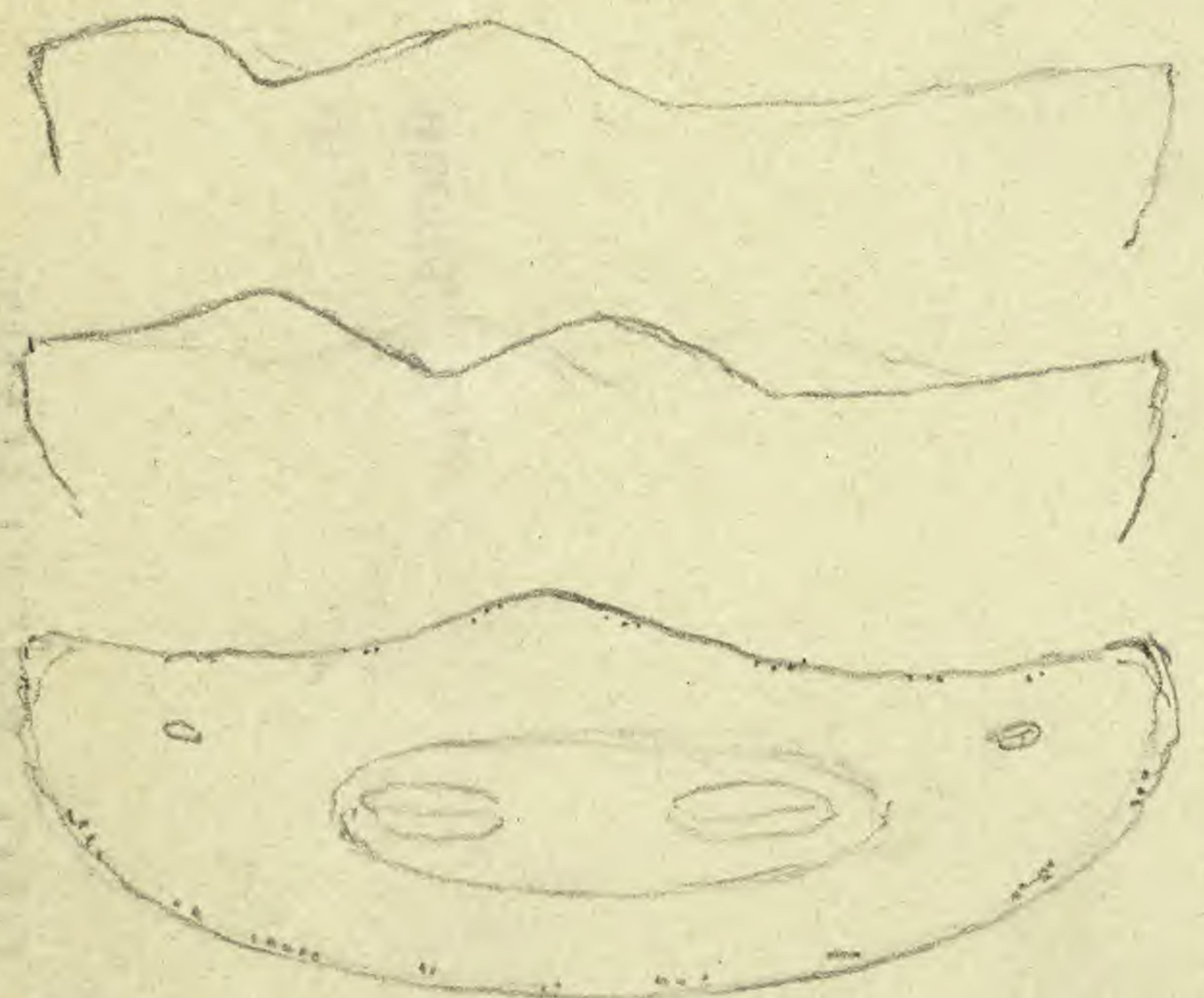
large leaf 1.9 mm wide

P. inops

May 19 1878

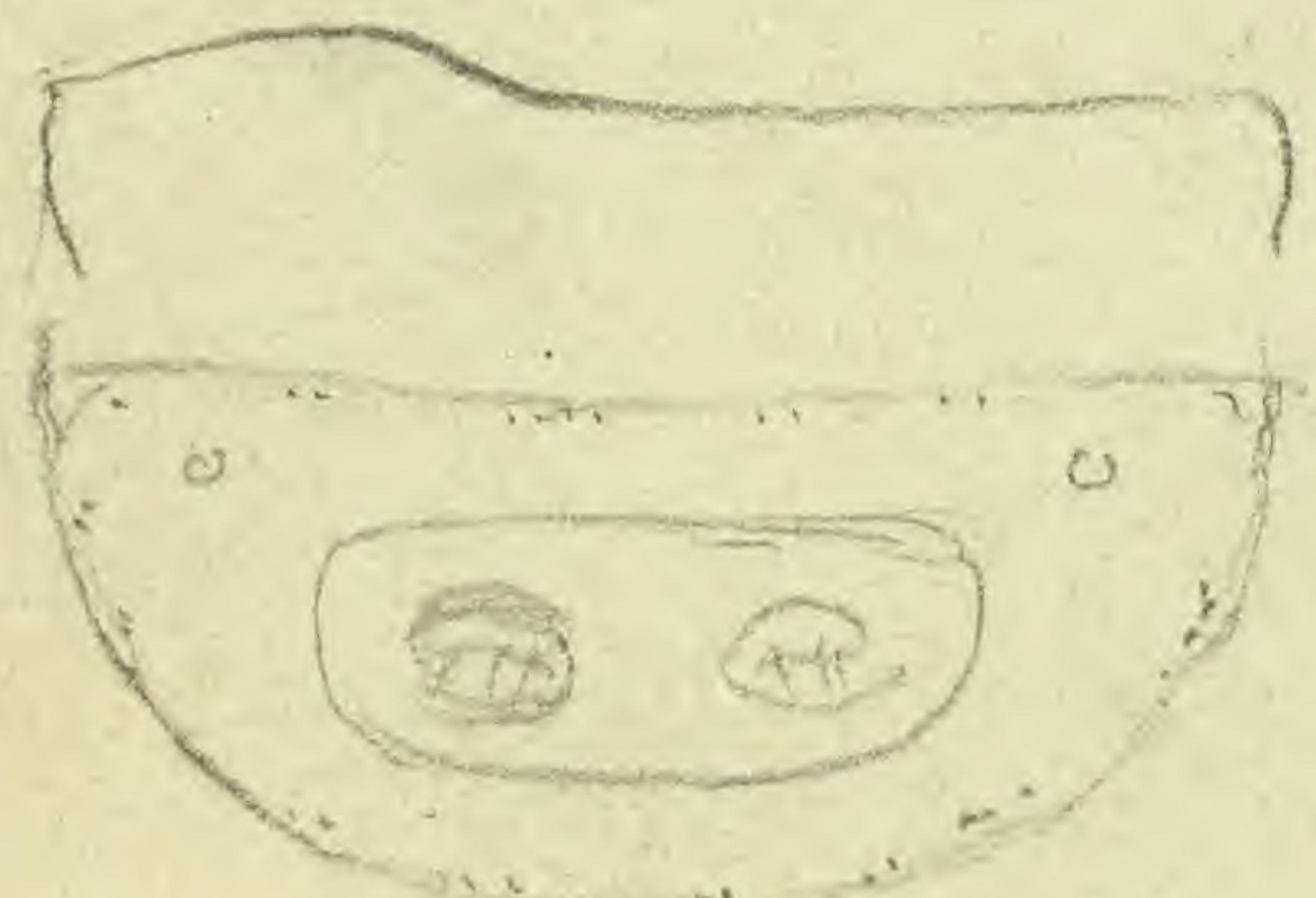
upper side often keeled, or even
2-ridged Germantown, Meehan

x30



smaller

leaf 1.2^{mm}
wide



ducts small, very weak hypoderm incomplete
and thin (much like Banksia)
hypoderm interrupted
in distinct layers above & below
feebly developed.



0 1 2 3 4 5 6 7 8 9 10

cm

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May 19 1878

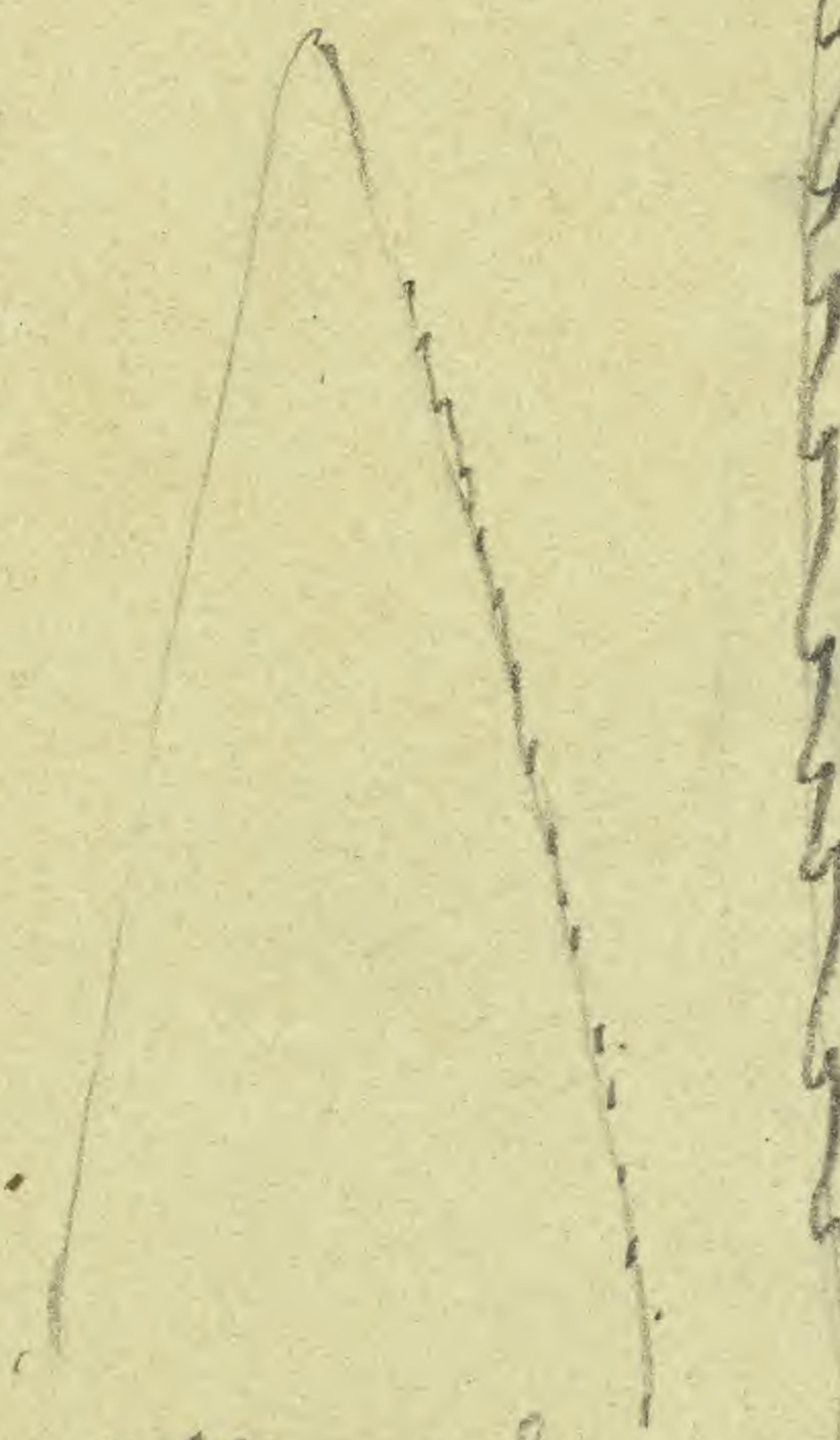
Pin inops

x30

Chattanooga Aug 1876



x60



leaves very often folded &
ridged - hypoderm interlocked
on lower side, scarcely any on upper side
ducts often 3, parenchymatous, surrounded by
(sometimes incomplete) hypoderm cells - rarely 1 or 2 without below



0 1 2 3 4 5 6 7 8 9 10

cm

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P. mops

May 19 1878

Terns

between Washington & Bellmore

SE

x30



no hypoderm
on ducts, very sparing under epiderm

x60



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cm

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P. inspis

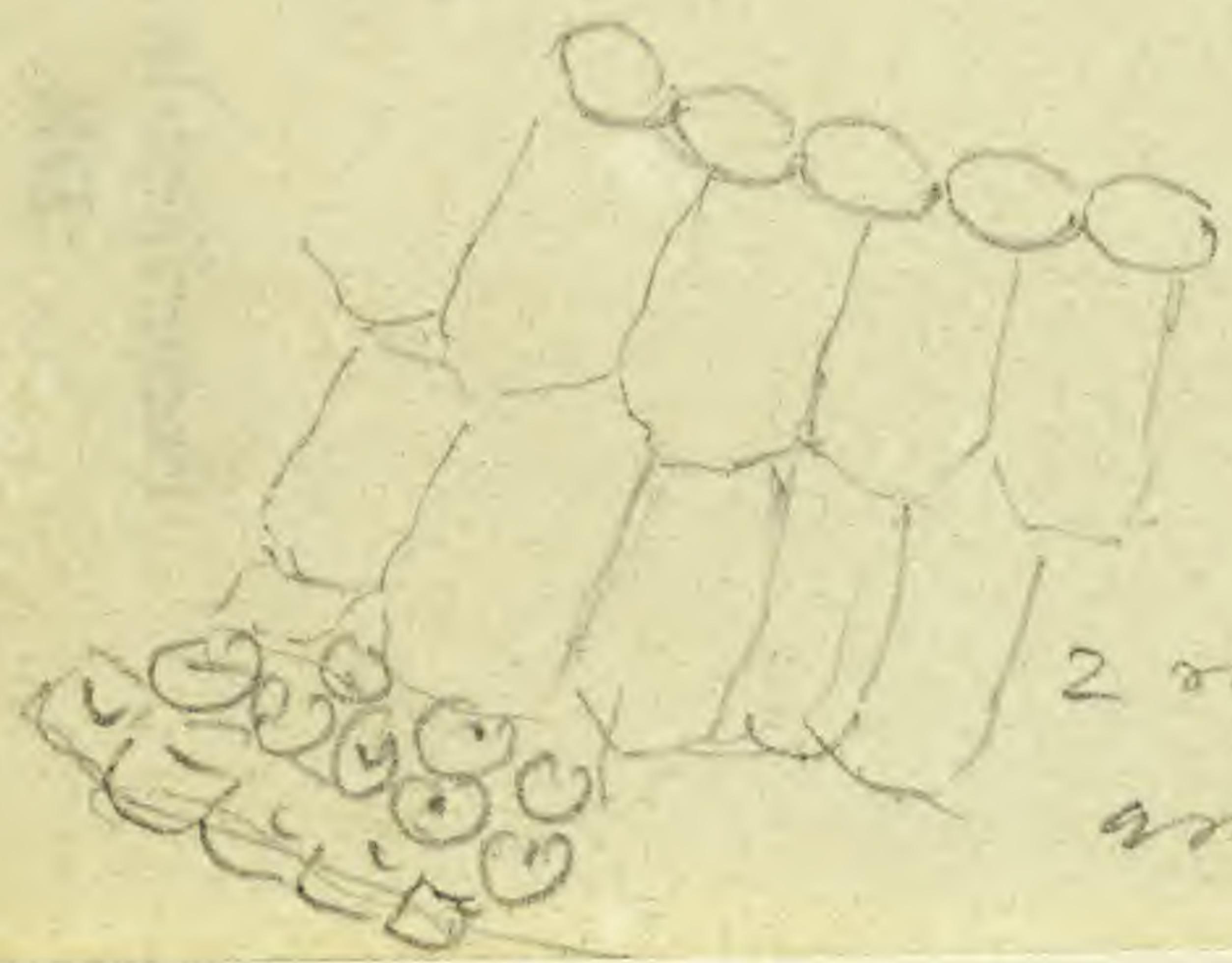
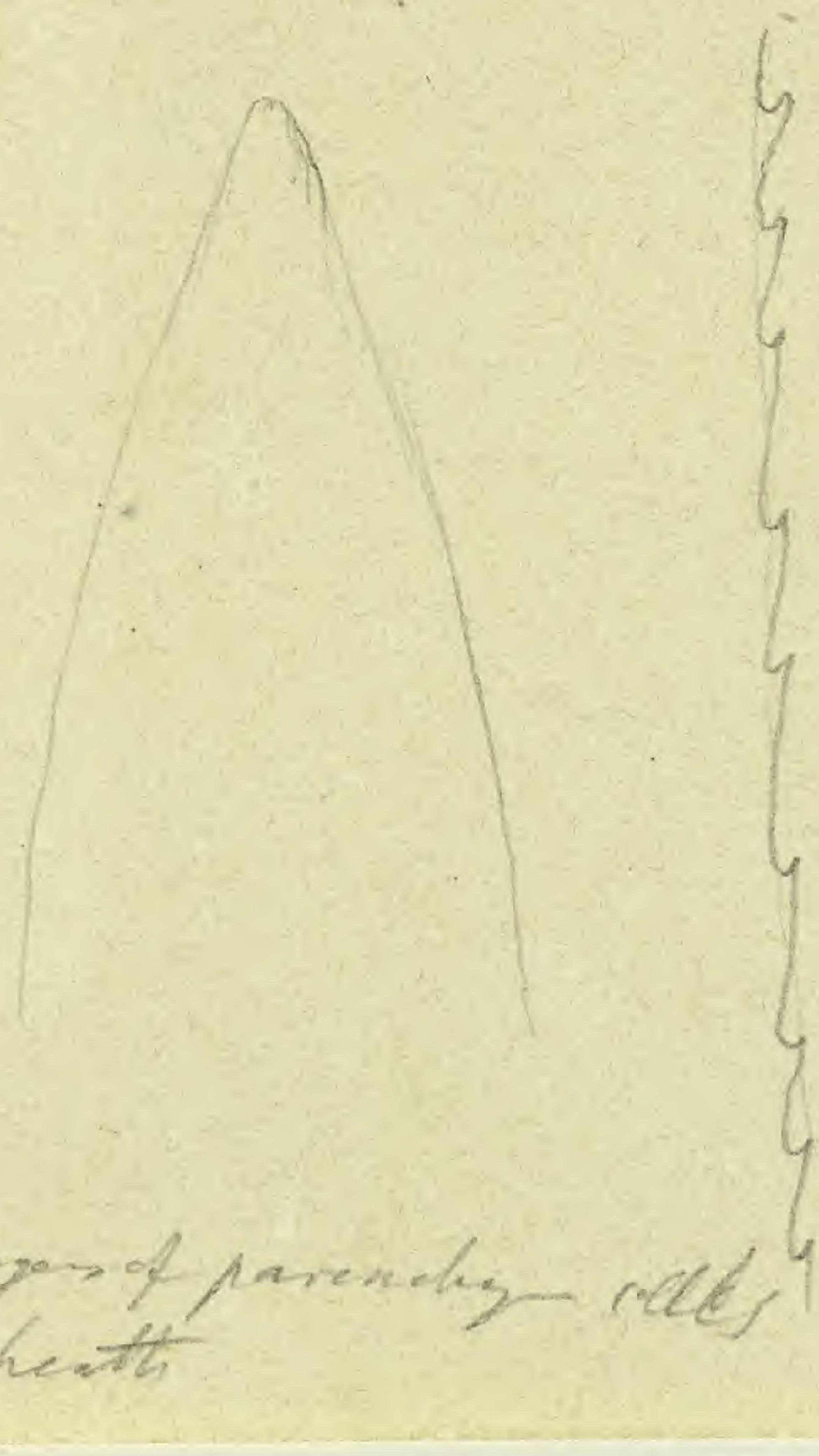
July 25 1878

positive, HOB mission May 1878 (fresh + glycerin)

x 30



x 60



2 regular layers of parenchyma cells
around sheath



0 1 2 3 4 5 6 7 8 9 10

cm

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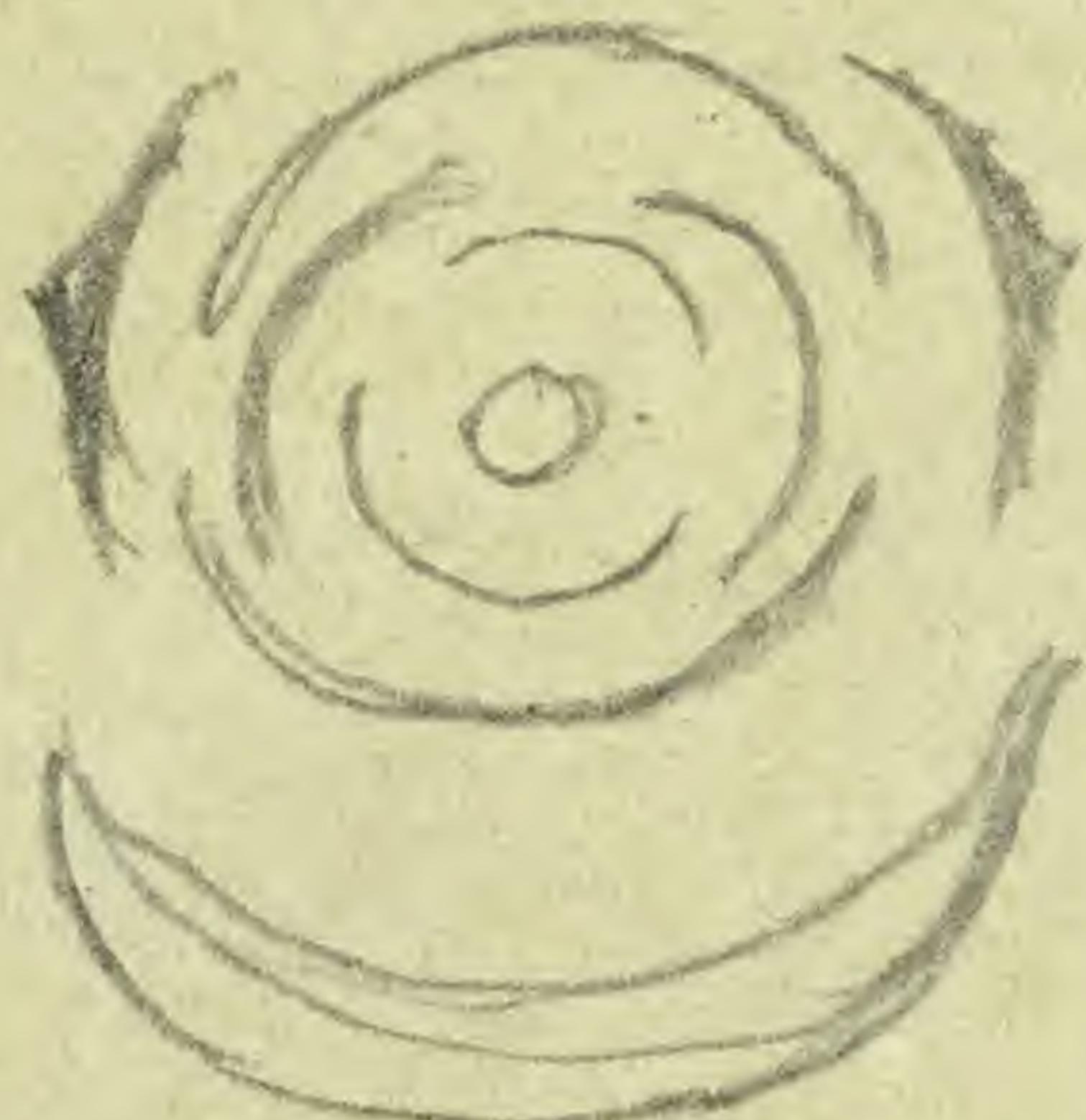
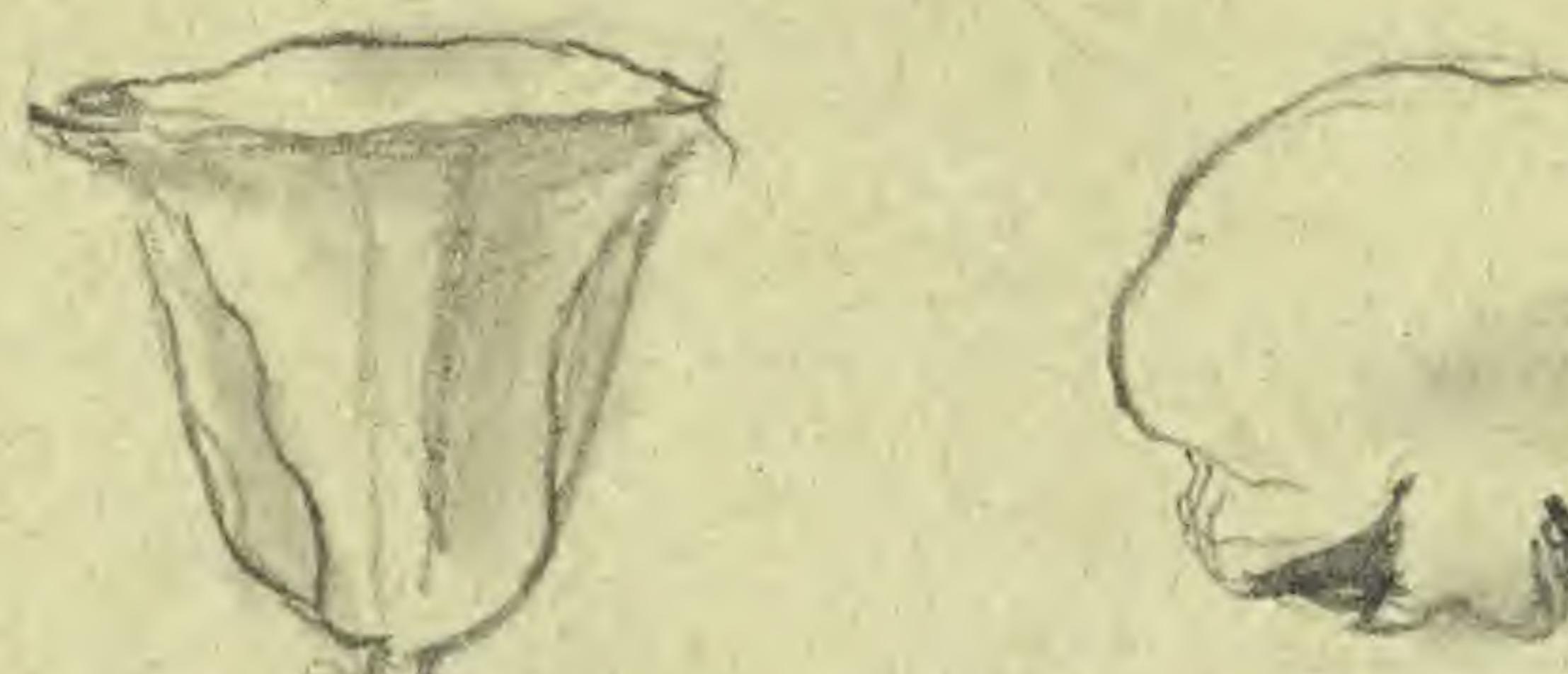
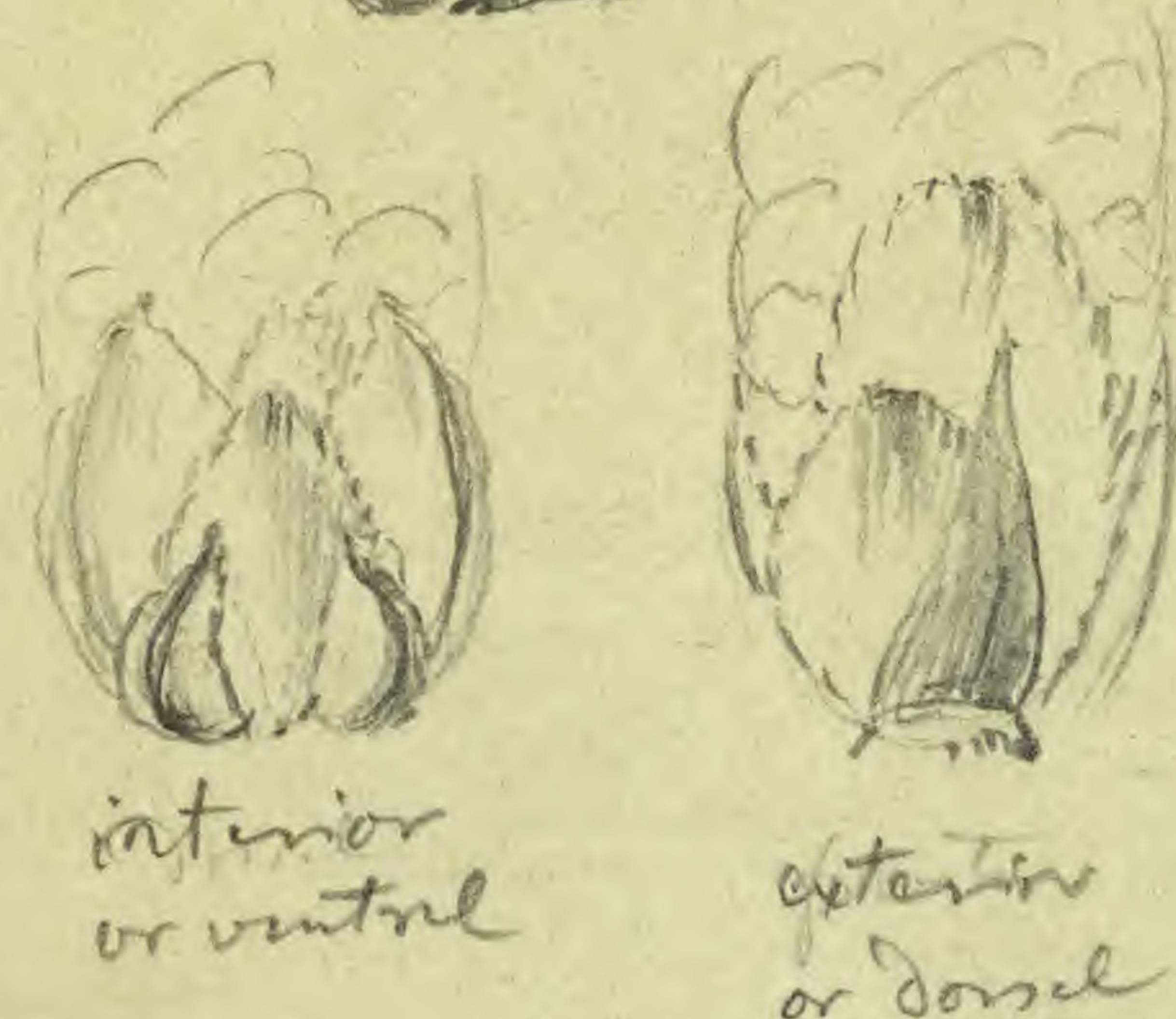
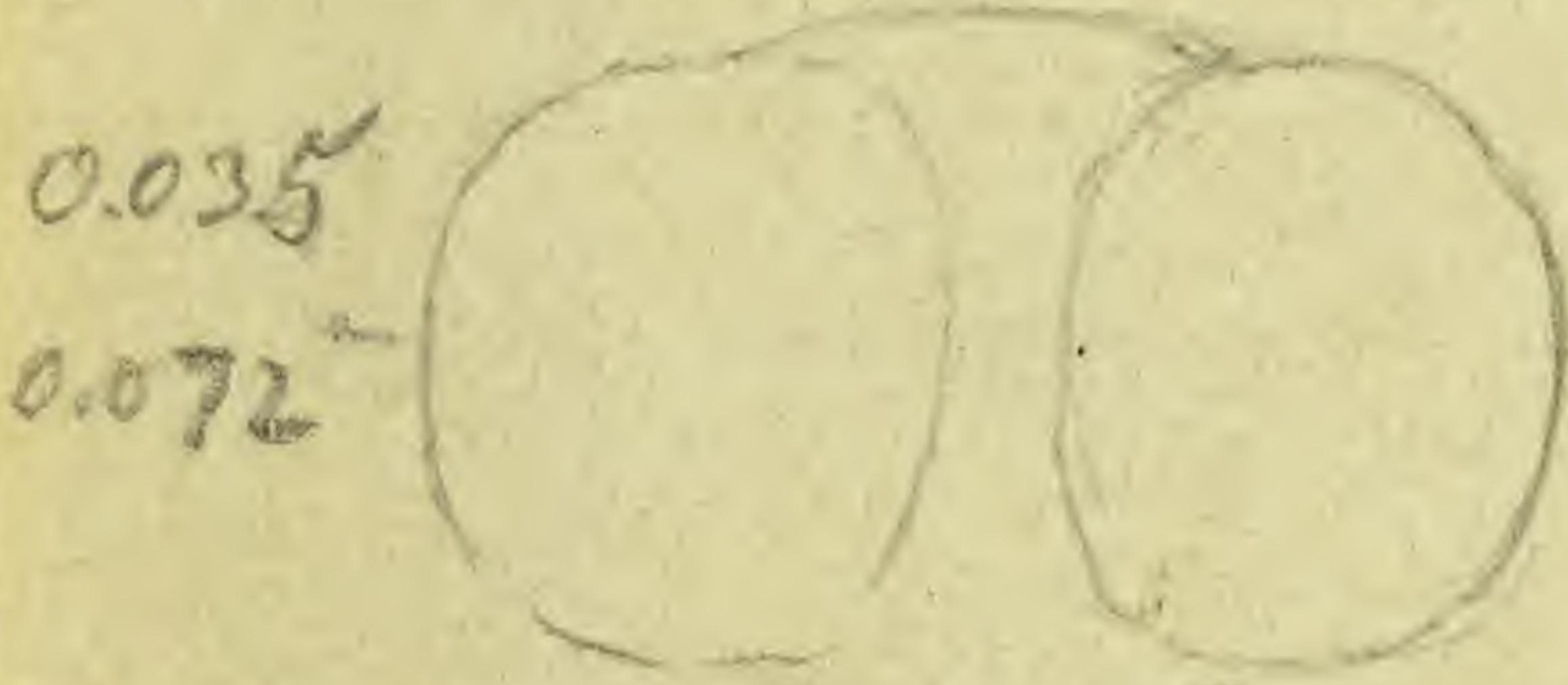
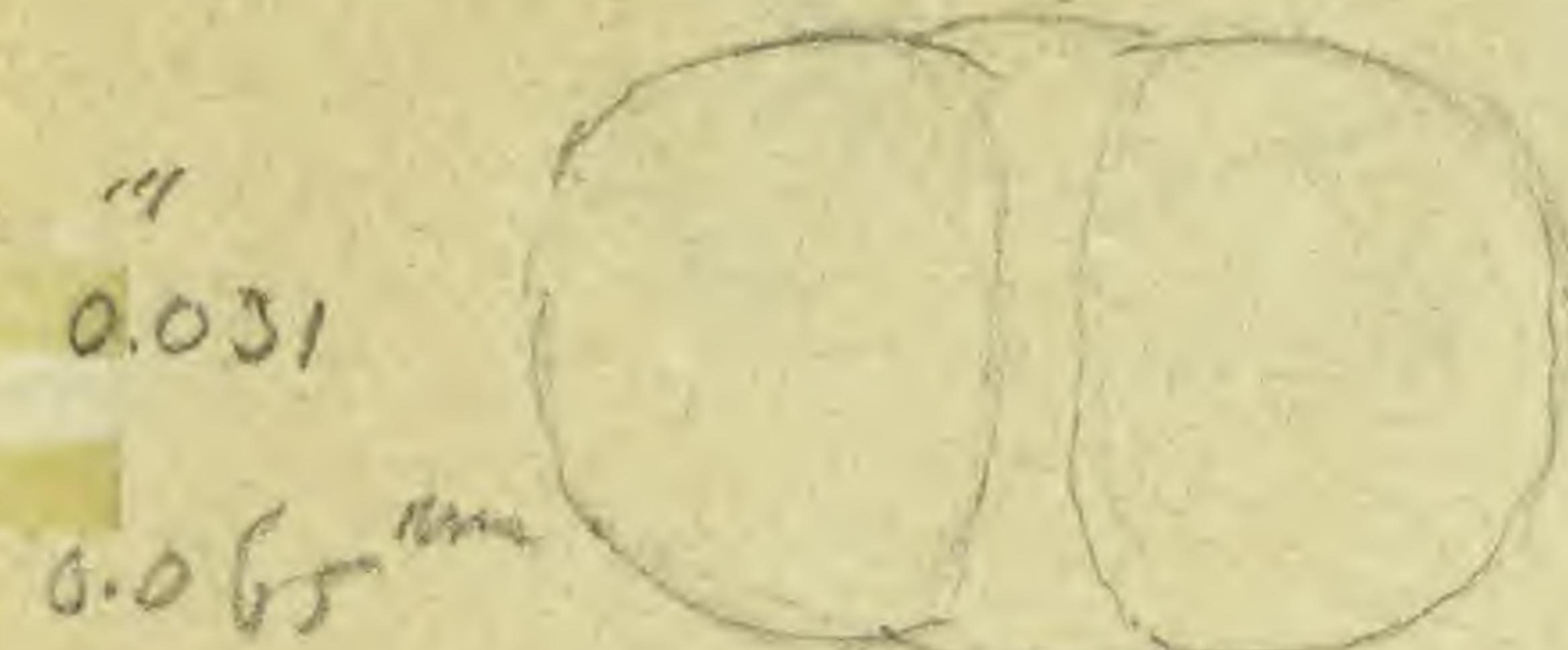
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Pinus strobus
Delaware Co Pa

June 1865



involute
wings

This grain probably belongs to *P. rigida*
which comes with *P. strobus*.

over



0
cm

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M. W. ALEXANDER,

SOUTH-EAST CORNER OF FOURTH AND MARKET STREETS,
ST. LOUIS.

13-14 bracts of vaginæ, others, short, run on
some in coverts, whole sheath 3 l. long
at the first season reduce to 2 or 1 l.
top branches glaucous, smooth
purple (bracts of leaf-blades) abt 2 l. long
upper $\frac{2}{3}$ early deciduous

Leaves - $\frac{8}{13}$ - $\frac{8}{8}$

415 / 270030
2790
2100

65

30 at 0072
2905
950

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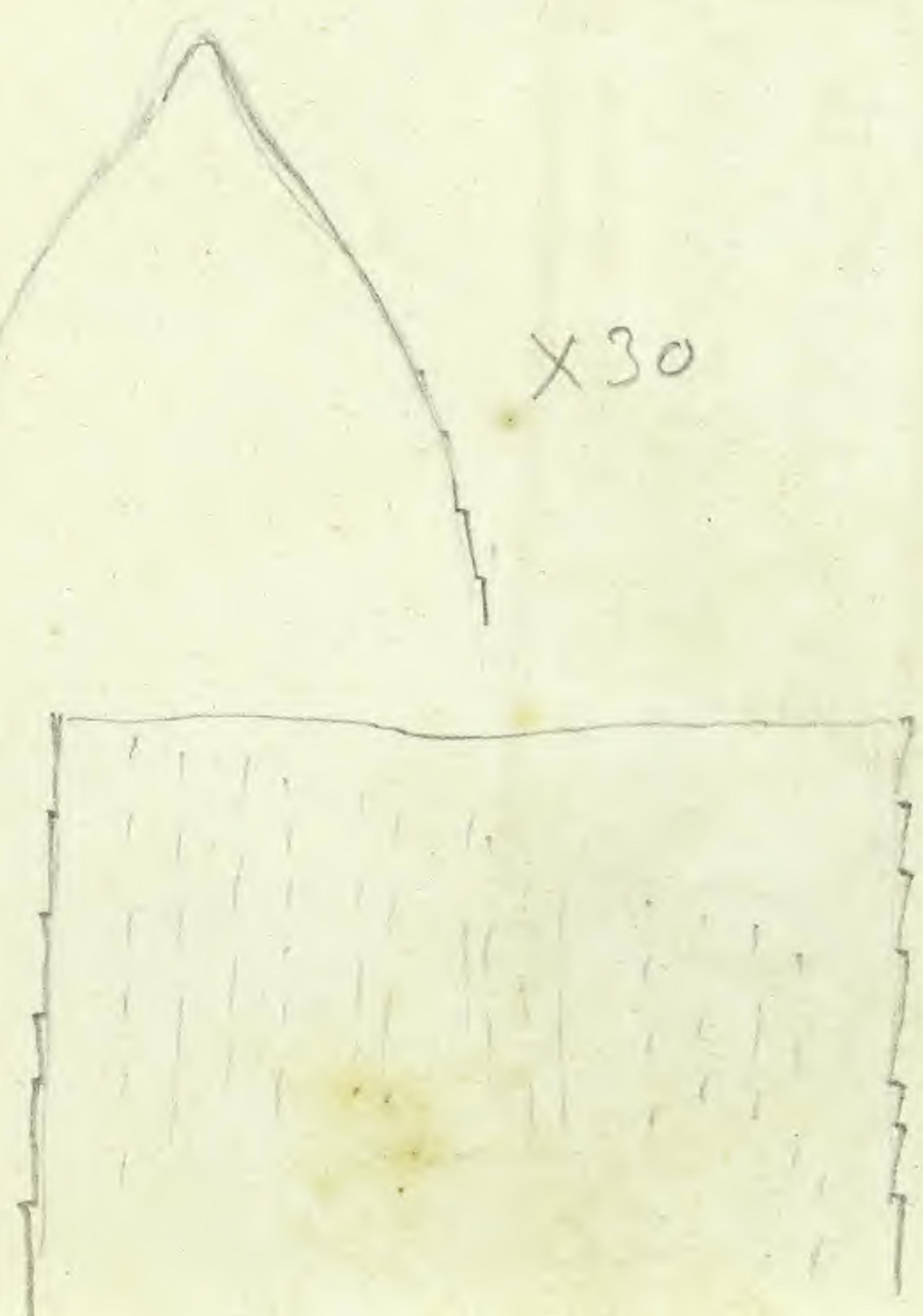
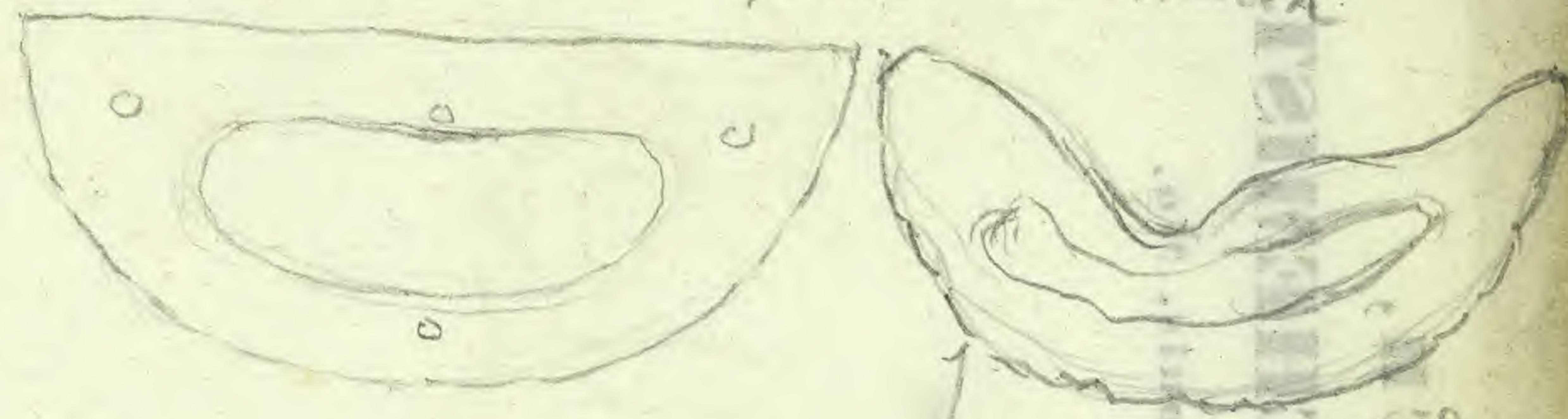
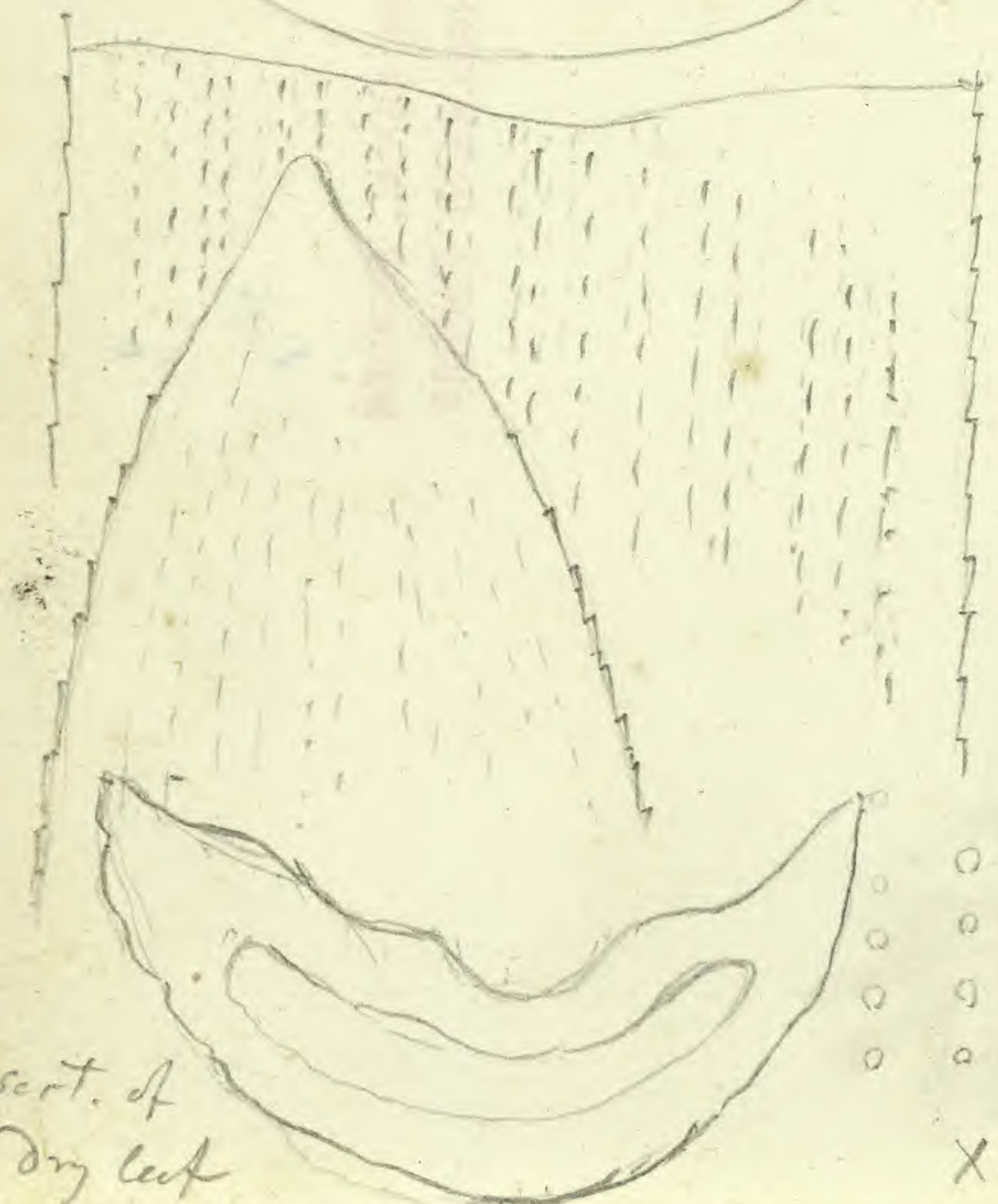
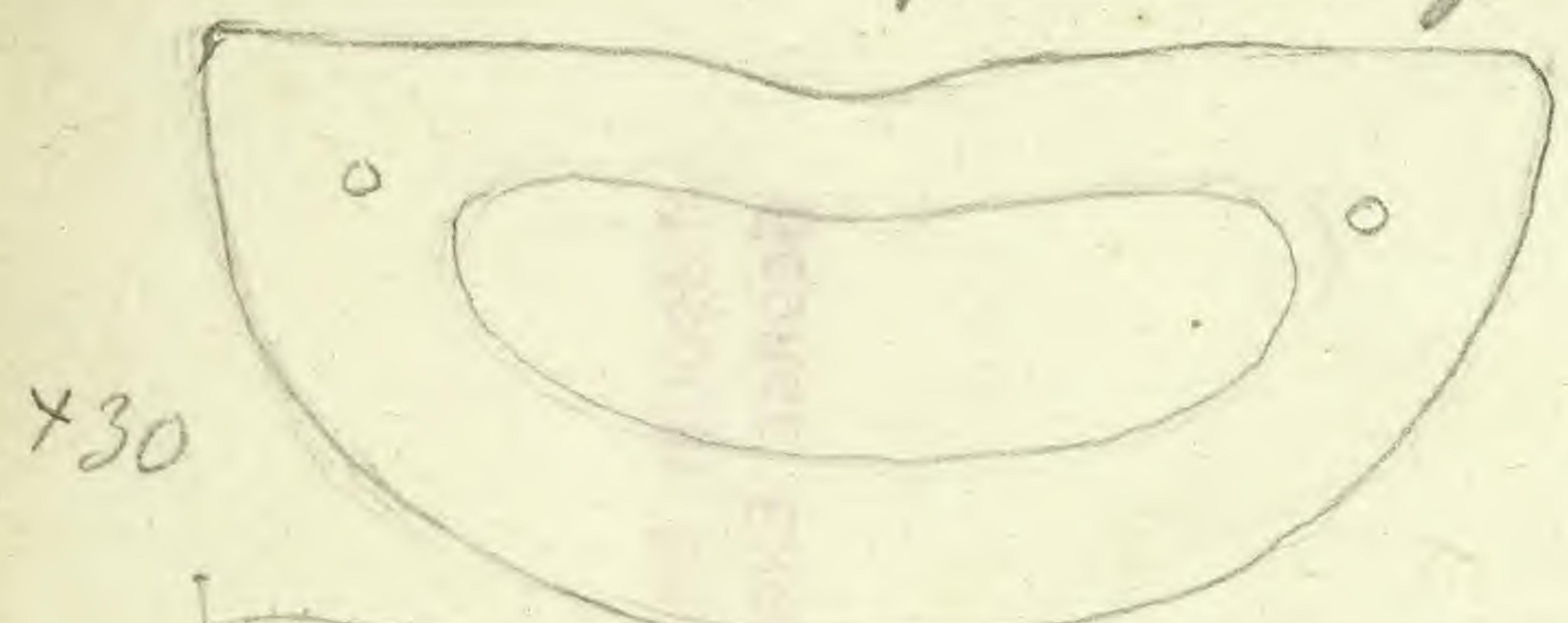
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Leaves of *Dianthus inops* Chadsford Pa July 5 1863
fruit bearing plant stamineate plant or branch



VISCHIENIA VISCIA

sort of dry leaf



0 1 2 3 4 5 6 7 8 9 10
cm

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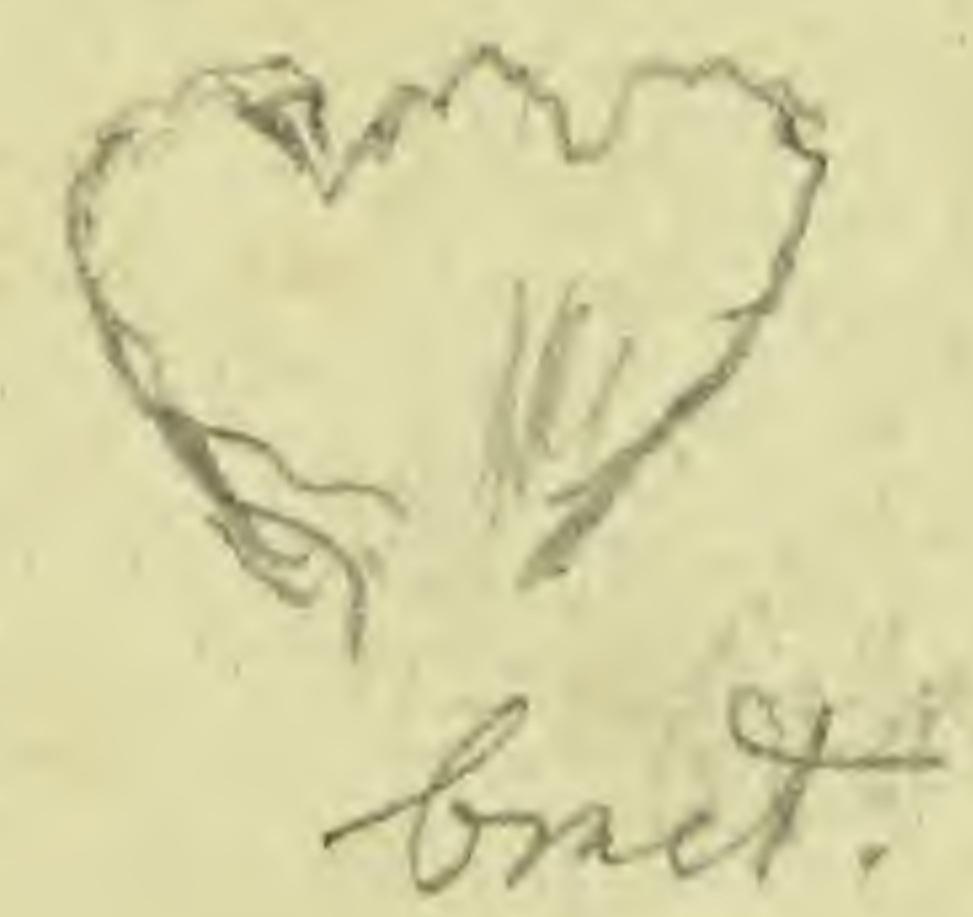
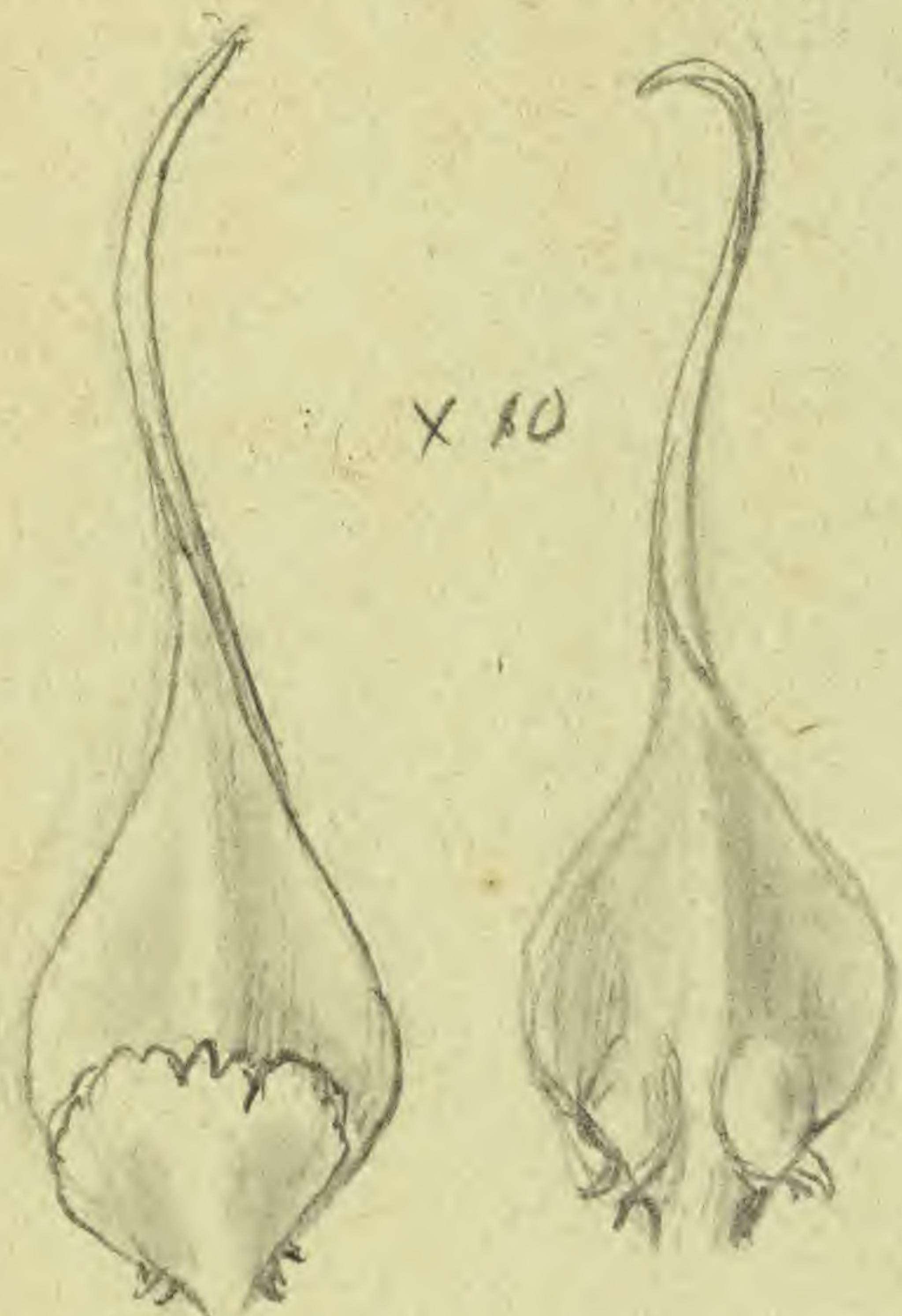
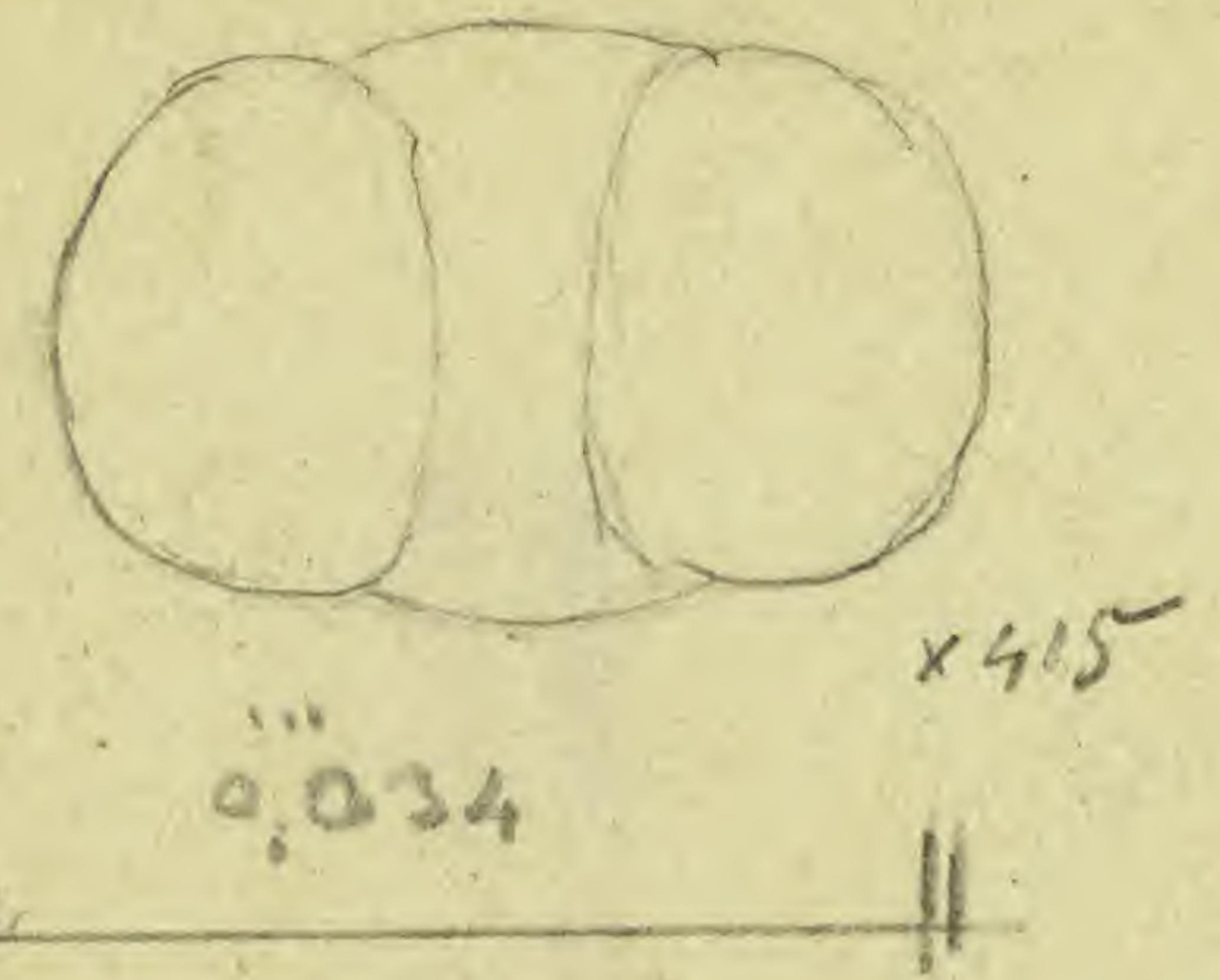
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Pinus inops Chaudron, Del.

May 31 1863



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cm

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465 33
1400
1255
15510
1245
305

1420 34
1255
1850
1660
190

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Prairie Crocus
Maryland Aug. 1858

x 10



6 cotyledon



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